San Diego & Arizona Eastern Railway Company

TIME TABLE

71

To Take Effect Sunday, May 27, 1934, at 12:01 A. M.

Pacific Standard Time (120th Meridian)

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY.

F. L. ANNABLE,
General Manager.

J. R. LOWE,
Superintendent.

SAN DIEGO-LAKESIDE SUBDIVISION

EASTWARD: Siding Capacity in Car Lengths	Station Numbers	Elevation	Distance from San Diego	Time Table No. 71 — May 27, 1934 — STATIONS	Distance from Lakeside	WESTWARD
Yard			1.1	ToR EIGHTH STREET	22.2	
				0.3		
	L 1		1.4	13th STREET	21.9	
				0.8		
	L 2		2.2	25th STREET	21.1	
				0.3		
			2.5	28th STREET	20.8	
				0.3		
	L 3		2.8	30th STREET	20.5	
				2.2		
13	L 5		5.0	CHOLLAS	18.3	
				0.9		
	L 6		5.9	LOWE	17.4	
				0.8		
	L 7		6.7	HOLLYDALE	16.6	
				0.5		
12	L 7A	317	7.2	ENCANTO	16.1	
				0.6		
	L 8		7.8	BEACON HILL	15.5	
				1.8		
	L 9		9.6	CONKLIN	13.7	
				0.6		
13	L 10	410	10.2	LEMON GROVE	13.1	
				1.0		
8	L 11		11.2	QUARRY SIDING	12.1	
				0.3		
	L 12	543	11.5	SPRING VALLEY	11.8	
				0.8		
25	L 13	539	12.3	To LA MESA	11.0	
				2.3		
	L 14		14.6	FT. ROBINSON	8.7	
				0.6		
9	L 15	741	15.2	GROSSMONT	8.1	
				1.6		
19	L 17	460	16.8	To EL CAJON	6.5	
				1.8		
	L 19		18.6	WEBB	4.7	
				1.4		
25	L 20	385	20.0	SANTEE	3.3	
				2.2		
2	L 22		22.2	RIVERVIEW	1.1	
				1.1		
18	L 24	400	23.3	R LAKESIDE	0.0	
				(22.2)		

Service by extra trains only

CHULA VISTA-CORONADO SUBDIVISION

EASTWARD — Siding Capacity in Car Lengths	Station Numbers	Distance from San Diego	Time Table No. 71 — May 27, 1934 — STATIONS	Distance from Third Street (Chula Vista)	WESTWARD
	3	4.8	TWELFTH ST. (Nat'l City)	4.9	
			0.8		
	C 1	5.6	24th STREET (Nat'l City)	4.1	
			1.5		
	C 2	7.1	POTASH	2.6	
			0.5		
	C 2A	7.6	F STREET JCT.	2.1	
			0.2		
	7	7.8	CHULA VISTA JCT. (Crossing El Centro Line	1.9	
			0.7		
	C 4	8.5	CHULA VISTA	1.2	
			1.2		
	C 5	9.7	K STREET (Chula Vista)	0.0	
			(9.7)		

Service by extra trains only.

Trains operating between 12th Street, National City and 3rd Street, Chula Vista will move under yard rules.

CHULA VISTA-CORONADO SUBDIVISION

EASTWARD — Siding Capacity in Car Lengths	Station Numbers	Distance from San Diego	Time Table No. 71 — May 27, 1934 — STATIONS	Distance from North Island	WESTWARD
	C 2A	7.6	F STREET JCT.	14.9	
			0.1		
11	C 3	7.7	MARMAROSA	14.8	
			2.2		
13	C 4A	9.9	SALT WORKS	12.6	
			3.6		
13	C 8	13.5	CORONADO HEIGHTS	9.0	
			5.3		
11	C13	18.8	TENT CITY	3.7	
			2.1		
	C15	20.9	CORONADO (Ferry Landing)	1.6	
Yard			1.6		
	C17	22.5	NORTH ISLAND	0.0	
			(14.9)		

Service by extra trains only.

SAN DIEGO-EL CENTRO SUBDIVISION

EASTWARD

Siding Capacity in Car Lengths	Location of Scales, Fuel, Water, Turning and Telephone Station	SECOND CLASS 52 Imperial Valley Mixed Leave Daily	FIRST CLASS 4 Golden State Leave Daily	Station Numbers	Distance from San Diego Miles	Time Table No. 71 May 27, 1934 STATIONS
		Figures shown Between San Diego and Market Street are for Information Only. Be Governed By	Current Time Tables A. T. & S. F. Ry.			
		8.40PM	7.15PM		0.0	R SAN DIEGO
		8.44PM	7.18PM		0.4	0.4 MARKET STREET
		8.44PM	7.18PM	00	0.4	MARKET STREET
		8.45	7.19	0	0.7	0.3 FIRST STREET
Yard	KBPOWY	8.47 8.59	s 7.20	1	1.1	0.4 To-R EIGHTH STREET
	P	9.11	7.27	3	4.8	3.7 TWELFTH STREET
14	P	f 9.21	f 7.33	7	7.4	2.6 CHULA VISTA JCT. (CROSSING C. V.
55	P	9.25	7 36	8	9.1	1.7 BOAL
	P			9	10.6	1.5 OTAY GRAVEL PIT (S
20	P	f 9.29	f 7.39	10	11.1	0.5 PALM CITY
99	KP	s 9.39	s 7.47	14	15.5	4.4 To-R SAN YSIDRO
110	PY	s 9.49	s 7.52	15	16.2	0.7 TIJUANA
30	P	f 9.54	f 7.57	18	18.5	2.3 R AGUA CALIENTE
47	P	f 10.09	f 8.05	23	24.0	5.5 GARCIA
33		f 10.19	f 8.13	26	27.5	3.5 MATANUCA
46	PWY	f 10.47	f 8.30	35	36.6	9.1 REDONDO
41	P	11.14	8.48	44	44.9	8.3 RITA
42	P	11.25	8.55	47	48.4	3.5 LA PUERTA
31	PW	s 11.44	s 9.07	52	52.8	4.4 To-R TECATE
22		f 12.07AM	f 9.21	58	59.6	6.8 LINDERO
16	P	12.09	9.23	59	60.3	0.7 DIVISION
67	PO	f 12.31	s 9.35	65	65.8	5.5 To CAMPO
33	PW	12.56	9.47	72	71.9	6.1 CLOVER FLAT
33	P	1.15	10.01	78	78.4	6.5 PUEBLO
45	PY	s 1.38	f 10.12	84	84.5	6.1 HIPASS
10	PW	s 2.10	s 10.30	93	92.9	8.4 To JACUMBA
37	PO	2.13	10.32	94	94.0	1.1 TITUS
19	P	f 2.50	f 10.54	100	100.7	6.7 CARRISO GORGE
	P		10.57	102	102.3	1.6 TUNNEL 15 SPUR
72	PW	f 3.25	f 11.24	109	109.7	7.4 DOS CABEZAS
36	P	3.59	11.38	117	117.7	8.0 SUGAR LOAF
85	PWOY	s 4.33	s 11.49	122	122.5	4.8 COYOTE WELLS
62	P	f 4.58	f 12.00	130	130.0	7.5 To PLASTER CITY
73	P	f 5.05	12.03AM	131	131.7	1.7 MAREA
73		f 5.16	f 12.07	134	134.4	2.7 DIXIELAND
97	P	f 5.28	f 12.15	139	139.8	5.4 To SEELEY
34	P	5.38	12.18	141	141.6	1.8 ASPARA
15		5.45	12.24	145	145.1	3.5 WILSIE
Yard	KBPWY	s 5.53AM	s 12.30AM	148	148.1	3.0 To-R EL CENTRO
		Arrive Daily	Arrive Daily			(148.1)
		(9.13)	(5.15)			Time Over Subdivision
		16.05	28.18			Average Speed per Hour

All first class trains stop on signal at Agua Caliente Hotel.
No. 52 stops on signal at Mills Crossing and Girl Scout.
No. 4 stops on signal at Dubbers Spur and Girl Scout.

WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION.

Track No. 1 classification yard is siding for Eighth St.
First crossover switch West of San Ysidro station is initial switch for Westward trains.
Second crossover switch West of San Ysidro station is initial switch for Eastward trains.

SAN DIEGO-EL CENTRO SUBDIVISION

WESTWARD

Time Table No. 71

May 27, 1934

STATIONS	Distance from El Centro Miles	Elevation Feet	FIRST CLASS 3 Golden State Arrive Daily	SECOND CLASS 51 Imperial Valley Mixed Arrive Daily
			Figures Shown Between San Diego and Market Street are for Information Only. Be Governed by Current Timetables A. T. & S. F. Ry.	
SAN DIEGO	148.1		8.30AM	4.50AM
0.4				
MARKET STREET	147.7		8.26AM	4.45AM
MARKET STREET	147.7		8.26AM	4.45AM
0.3				
FIRST STREET	147.4		8.25	4.43
0.4				
EIGHTH STREET KN	147.0	10	8.23	4.40 4.30
3.7				
TWELFTH STREET	143.3		8.15	4.20
2.6				
NULA VISTA JCT. (CROSSING C. V. LINE)	140.7		f 8.09	f 4.11
1.7				
BOAL	139.0		8.06	4.04
1.5				
OTAY GRAVEL PIT (Spur)	137.5			
0.5				
PALM CITY	137.0	35	f 8.03	f 3.58
4.4				
SAN YSIDRO AU	132.6	100	s 7.55	s 3.47
0.7				
TIJUANA	131.9	100	s 7.50	s 3.36
2.3				
AGUA CALIENTE	129.6		f 7.45	f 3.30
5.5				
GARCIA	124.1	210	f 7.36	f 3.13
3.5				
MATANUCA	120.6	350	f 7.29	f 3.02
9.1				
REDONDO	111.5	765	f 7.15	f 2.38
8.3				
RITA	103.2	1315	7.00	2.16
3.5				
LA PUERTA	99.7	1590	6.54	2.07
4.4				
TECATE CA	95.3	1690	s 6.46	s 1.55
6.8				
LINDERO	88.5	2120	f 6.32	f 1.31
0.7				
DIVISION	87.8	2190		1.29
5.5				
CAMPO KA	82.3	2590	s 6.21	f 1.15
6.1				
CLOVER FLAT	76.2	2925	6.09	**12.56**
6.5				
PUEBLO	69.7	3425	5.57	12.35
6.1				
HIPASS	63.6	3660	f 5.46	s 12.19AM
8.4				
JACUMBA JO	55.2	2830	s 5.22	s 11.27
1.1				
TITUS	54.2	2757	5.16	11.19
6.7				
CARRISO GORGE	47.4	2380	f 4.54	f **10.54**
1.6				
TUNNEL 15 SPUR	45.8		4.47	
7.4				
DOS CABEZAS	38.4	1670	f 4.22	f 10.05
8.0				
SUGAR LOAF	30.4	790	**3.59**	9.25
4.8				
COYOTE WELLS	25.6	290	f 3.45	s 9.03
7.5				
PLASTER CITY NA	18.1	40	f 3.32	f 8.25
1.7				
MAREA	16.4	27	3.29	8.20
2.7				
DIXIELAND	13.7	-10	f 3.25	f 8.14
5.4				
SEELEY SY	8.3	-44	f 3.17	s 8.02
1.8				
ASPARA	6.5	-46	3.12	7.56
3.5				
WILSIE	3.0	-47	3.06	7.49
3.0				
EL CENTRO CR	0.0	-49	3.00AM	7.40PM
(148.1)			Leave Daily	Leave Daily
Time Over Subdivision			(5.30)	(9.10)
Average Speed per Hour			26.90	16.14

WARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION:

Track No. 1 classification yard is siding for Eighth St.
First crossover switch West of San Ysidro station is initial switch for Westward trains.
Second crossover switch West of San Ysidro station is initial switch for Eastward trains.

All first class trains stop on signal at Agua Caliente Hotel.
Nos. 3 and 51 stop on signal at Mills Crossing and Girl Scout.

Special Instructions

"SAFETY FIRST"

THE FOLLOWING APPLICATIONS AND ADDITIONS ARE MADE TO THE BOOK OF RULES:

STANDARD CLOCKS

1. Telegraph office and Engine house San Diego, San Ysidro and El Centro.

WATCH INSPECTORS

2. Stanley A. Pope, Manager of Time Service, San Francisco.
Leo. M. Schiller, local watch inspector, 1025 Fifth Avenue, San Diego.
R. E. Couch, local watch inspector, El Centro.
Sieglitz and Co., local watch inspectors, Calexico.

CLEARANCE CARDS

3. All trains get clearance cards as follows:
All at San Ysidro and Tecate.
All Eastward at 8th Street.

REGISTER EXCEPTIONS

4. First class trains register by registering ticket (Form 2642) at 8th Street. Trains originating and terminating at Agua Caliente only will register there.

5. Extra trains will register at San Ysidro.

GRADE CROSSINGS

6. Conductors and Brakemen, flagging crossings, will cross the tracks before signalling enginemen to proceed, and if more than one track to be crossed will remain in advance of their train until last track is reached.

7. Trains on San Diego-El Centro Subdivision will approach railroad crossing at F Street, Chula Vista, expecting to find the Main Line blocked and will pass over this crossing not to exceed 15 miles per hour.

8. At following grade crossings, trains will stop not nearer than 50 feet nor farther than 500 feet from the crossing and will proceed only on signal from flagman:
Crossing at Chula Vista Jct. except San Diego-El Centro subdivision trains which are governed by paragraph 7, Special instructions in Time Table.
San Diego Electric Railway crossing at First and Orange Street, Coronado.
San Diego Electric Railway crossing at 16th Street, San Diego.
Transfer track of San Diego Electric Railway Company, with tracks of that Company on Broadway, San Diego.

9. Trains going into Otay Gravel Pit will stop at West line of Main Ave., and not cross except when preceded by flagman with Red flag or light.

10. Trains leaving Otay Gravel Pit must be preceded by flagman over Main Ave., but will not be required to stop.

11. Trains operating at Chula Vista will stop on F Street before crossing National Ave.
At Second Ave., and at sidewalk on Third Ave., near G Street stop and be preceded by flagman.

12. Freight trains will stop and pass over crossings at Lookout Ave., La Mesa, and Magnolia Ave., Santee, only when preceded by flagman.

13. Trains using San Diego Electric Railway Company Transfer will stop before crossing tracks of that Company on F Street, San Diego.

14. Trains approaching Mount Hope cemetery west of bridge 6 will use care to avoid meeting funeral parties where road crosses track. If any should be encountered there, hold train back and allow party to cross ahead of train.

MAXIMUM SPEED OF TRAINS, EXCEPT AS OTHERWISE NOTED, IN MILES PER HOUR AS FOLLOWS:

15.

	M.P.H.
Passenger trains	50
Gas-electric trains	40
Freight trains	35
Mixed trains	30
Light engines	35
Engines 101 to 106, inclusive	35
Engines backing, coupled in train or light, main line	25
Same on branch lines	20
Trains handling locomotive crane	20
Trains handling dead or disabled engines with all rods on or with main or side rods removed	30
Same with main and side rods removed	20
All trains through sidings, main line	12
Same through sidings, branch lines	10

OTHER MAXIMUM SPEEDS IN MILES PER HOUR AS FOLLOWS:

16. SAN DIEGO-EL CENTRO SUBDIVISION

	M.P.H.
ALL TRAINS between following points:	
Bridge 98 C and Tunnel 8, on curves	10
On Rodriguez spur	10
Tunnel No. 5 at Mile Post 96.6 and Culvert 106-B	15
Market St. and Schley St.	20
Over road crossings at 13th and 18th Sts., National City	20
Mile Post 144 and El Centro	40
PASSENGER TRAINS DESCENDING between following points:	
Redondo and Kilometer 54	35
Tecate and Mile Post 83	35
Hipass and Jacumba	35
Culvert 106-B and Coyote Wells	35
FREIGHT AND MIXED TRAINS DESCENDING between following points:	
Hipass and Jacumba	20
Culvert 106-B and Coyote Wells	20
Redondo and Kilometer 54	25
Tecate and Mile Post 83	25

SAN DIEGO-LAKESIDE SUBDIVISION

17.

SAN DIEGO-LAKESIDE SUBDIVISION ALL TRAINS:	M.P.H.
Crossing 30th Street on Commercial Street	5
Across 13th St. and National Ave.	10
Over Electric Ry. crossings at 16th St. and 25th on Commercial St.	10
Between 8th Street and 32nd Street	15
Over Horseshoe Bridge in Chollas Valley	20
Between 32nd St., San Diego and Riverview	25
Between Riverview and Lakeside	10

CHULA VISTA-CORONADO SUBDIVISION

18.

ALL TRAINS:	M.P.H.
On F Street and on 3rd Ave., Chula Vista	10
Between F St. Jct. and One Mile East of Salt Works	25
Between One Mile East of Salt Works and Tent City	10
Between Tent City and North Island	15

19. SPEED TABLE—MILES

Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.
6	10		21	2	51	31	1	56	41	1	27
8	7	30	22	2	43	32	1	52	42	1	25
10	6		23	2	36	33	1	49	43	1	23
12	5		24	2	30	34	1	45	44	1	21
15	4		25	2	24	35	1	42	45	1	20
16	3	45	26	2	18	36	1	40	46	1	18
17	3	31	27	2	13	37	1	37	47	1	16
18	3	20	28	2	8	38	1	34	48	1	15
19	3	9	29	2	4	39	1	33	49	1	13
20	3		30	2		40	1	30	50	1	12

20. SPEED TABLE—KILOMETERS

Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.
6	6	13	21	1	46	31	1	12	41	0	54
8	4	40	22	1	41	32	1	10	42	0	53
10	3	44	23	1	37	33	1	08	43	0	52
12	3	06	24	1	33	34	1	05	44	0	51
15	2	29	25	1	29	35	1	03	45	0	50
16	2	20	26	1	26	36	1	02	46	0	48
17	2	11	27	1	23	37	1	00	47	0	47
18	2	04	28	1	20	38	0	58	48	0	46
19	1	57	29	1	17	39	0	57	49	0	45
20	1	52	30	1	15	40	0	56	50	0	44

21. Rule S-72. WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION.

22. RULE 93. Yard limits are defined by yard limit signs at the following stations:

EIGHTH STREET	SAN YSIDRO
TIJUANA	EL CENTRO

MISCELLANEOUS

23. Locomotives must not operate on Rodriguez spur beyond a point 40 ft. east of cement shed.

24. Rule 10 (H) is changed to read: "Yellow signal must be placed one-quarter mile from structure," instead of one-half mile. Green signal referred to in rule will not be used.
Rule 10 (J) is changed to read: "Slow boards will be placed one-quarter mile from structure or track," instead of one-half mile.

25. Rule 869. All brakemen will ride on top of freight and mixed trains as follows:

EASTWARD	Hipass to Jacumba Culvert 106-B to Coyote Wells.
WESTWARD, ON TRAINS OF 25 OR MORE CARS	Mile Post 83 to Tecate. Kilometer 54 to Redondo.

26. Trains will display head lights and marker lights through tunnels No. 6 to No. 20, inclusive.

27. Engine flues must not be sanded while passing places where damage from fire might result.

28. Cars must not be cut off train on grades depending on hand or air-brakes to hold them, but must be placed with the Engine.

29. Engine bell must be rung continuously between the following points:
Main line: El Centro and Seeley, through Carriso Gorge M. P. 96 to M. P. 106, 8th Street and San Ysidro.
Lakeside line: Eighth St. and Mount Hope Cemetery.

30. When a train parts while in motion due to uncoupling by reason of knuckle slipping or opening or similar causes, Conductors will personally make inspections and ascertain, if possible, the actual cause and take necessary steps to prevent a recurrence.

31. When cars are left on grades not protected with derailers they must be chained to the rail.

32. When making up through freight trains, empty and wood frame cars must be placed behind heavy loads and in rear of trains.

33. Air must be cut in when handling cars on Commercial Street between 13th and 32nd Streets.

34. Cars must not be left standing on spur or siding at Palm City nearer than 150 ft. to Palm Avenue crossing.

TRAIN AND AIR INSPECTION

35. In addition to running tests that are made after leaving terminal, inspection points, or at any point where brake pipe has been broken, to fully comply with Rule No. 16 of Air Brake rules, running test will be made on eastward passenger trains at Culvert 106B.

36. Rule 17, rear end test between terminals per "Rules and Regulations governing Care and Operation of Air Brakes and Air Signal Apparatus," will be made on all trains at Mills Crossing or Hipass.
Rear end test and train inspection will be made on Train No. 52 and all Eastward freight trains at Culvert 106-B.

37. Immediately after starting on initial trip each day, running test of hand brakes must be made on both front and rear end of Gas Electric Motor cars.

38. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates Seventy (70) pounds.

39. Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

40. Following points are designated for careful inspection of freight trains: Eastward freight and mixed trains will stop not less than five minutes at Jacumba MP 114 and Coyote Wells for cooling of wheels and inspection.
Westward freight and mixed trains will stop not less than five minutes at Campo or Clover Flat and Tecate for cooling of wheels and inspection.
Eastward passenger trains will stop at Jacumba and at Coyote Wells for inspection of wheels and brakes.

41. Passenger equipment must not be switched, either in yards or on line, unless air brakes are cut in and made operative.

42. Gross tonnage of any freight train must not exceed the following number of M's per operative brake between the stations shown:

Hipass and Coyote Wells	100 M's
Hipass and Redondo	125 M's

METHOD FOR TESTING FOR TRIPLE, CAUSING UNDESIRED APPLICATION OF AIR BRAKES (DYNAMITER)

43. If test is made on a grade, a sufficient number of hand brakes must be set to secure the train.
Test must be made from rear end of train and under no circumstances by the engineman.

INSTRUCTIONS
IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) FIVE GALLON FIRE EXTINGUISHERS ARE LOCATED AT FOLLOWING POINTS:

Between Tunnels 1 and 2
Between Tunnels 3 and 4
West end Tunnel 5
West end Bridge 97-C
East end Tunnel 6
Both ends Tunnel 8
West end Tunnel 10
West end Tunnel 11
West end Tunnel 12
East end Tunnel 13
West end Tunnel 14
West end Tunnel 15
West end Tunnel 16
East end Tunnel 17
West end Tunnel 18
West end Bridge 104-A
West end Bridge 104-B
West end Tunnel 19
West end Tunnel 20
West end Tunnel 21

Note:—Fire extinguishers at Tunnels are located just inside tunnel portals.

(b) CONNECTIONS FOR PORTABLE PHONES IN CARRISO GORGE ARE LOCATED AT FOLLOWING POINTS:

Near west end Tunnel 5
east end Tunnel 6
west end abandoned Tunnel 7
both ends Tunnel 8
west end Tunnel 9
west end Tunnel 10
east end Tunnel 12
east end Tunnel 13
Near both ends Tunnel 14
west end Tunnel 15
east end Tunnel 16
west end Tunnel 17
west end Tunnel 18
west end Tunnel 19
west end Tunnel 20
west end Tunnel 21

There are telephones at the east end of Tunnel 11 and at the east end of Bridge 102-A.

These connections are provided for emergency service only and anyone using them in an attempt to get help must, after his call has been placed, DISCONNECT HIS PORTABLE PHONE so that Operator at San Diego can call camps. Failure to disconnect phone will interfere with calling circuit.

(c) FIRE HOSE AND CONNECTIONS ON LOCOMOTIVES:

Engines No. 101, 102, 103, 104, 105, 106, 2353, and 2354, are equipped with fire hose connections on feed water line between the injector and the check valve. On the deck of the tender of these engines there is a hose reel holding 100 feet of fire hose with nozzle attached. When using hose, be sure to close valve ahead of the check valve before opening valve on the fire hose connection. This will prevent hot water backing up into hose line in case check valve fails to seat.

Other engines not equipped with hose connections, if location of fire permits, will get Tank Car at Tunnel 15 Spur and move it to fire, using equipment mounted on tank.

(d) TANK CAR MW 1001:

Tank Car MW 1001 with 10,000 gallons of water is kept first out at Tunnel 15 Spur. On deck over top of tank is mounted a steam pump, 300 feet of fire hose on a reel, and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end, and extension cord to be plugged into socket in cab of engine is kept in tool box. Steam line to pump is fitted with steam hose connection at each end of car, so that pump may be operated from either end of engine or train, and by either steam or air. A length of steam hose and fittings are kept in tool box of tank car to make connections. When pump is run by air, automatic brake valve on engine should be held in Full Release position to increase volume of air.

2. INSTRUCTIONS:

(a) Rear brakeman and fireman on eastward trains will keep a sharp lookout after passing Tunnel 15 Spur and be prepared to accept stop signal from Tunnel Guard.

(b) Steam hose must be coupled and steam cut through to rear of passenger trains at all times regardless of weather conditions. This in order to handle fire-fighting car at Tunnel 15 Spur at rear of train.

(c) Trains discovering a fire should immediately call operator at San Diego so other equipment can be dispatched to the fire. Every effort should be made to extinguish the fire with the equipment on the engine and tender. If it is evident that fire cannot be put out with equipment at hand, or if engine is not equipped with fire hose, and it is possible to reach Tank Car at Tunnel 15 Spur, get that car and return it to the fire while there is sufficient water left in the tender to make the round trip. Tank Car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car.

Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(d) Tank Car MW 1001 must always be left, filled and first out at Tunnel 15 Spur.

ect on cars, espe-

rock bins, Spring

or impaired clear-

ks on

n Diego

	Capacity
	16 Cars
	4 Cars
	4 Cars
	30 Cars
	16 Cars
	17 Cars
	5 Cars
	7 Cars
	11 Cars
	5 Cars

ENTRO

Distance from San Diego.	Coyote Wells to Hipass 2.2% Grade
14.2	367
18.1	400
73.7	720
83.5	655
96.0	825
	1100
	1100
	1100
	950
	3
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stations shown.

59. LIGHT WEIGHT OF PASSENGER CARS

	Car No.	Light Weight
Cafe-Observation	01 to 04	127,400
Business Cars	050	146,500
" "	051	57,800
Comb. Coach-Baggage	174	136,900
" " "	175	105,200
" " "	176 to 178	115,280
Coach	200	108,900
"	201 to 205	107,900
"	206 to 208	112,500
Pullman....Wood		125,000
" ....Steel Underframe		145,000
" ....All Steel (Fort series)		152,000
" ....All Steel (Lake series)		163,500
" ....All Steel (Camp series)		159,680
" ....All Steel (Rock series)		167,700

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Marshall Widenor, Asst. Claim Agent, San Diego.
Office Phone: Main 4161. Res. Phone: Main 0364.

S. A. Lamey, Trainmaster and Chief Dispatcher.

THE FOLLOWING APPLICATIONS AND ADDITIONS ARE MADE TO THE BOOK OF RULES:

STANDARD CLOCKS

1. Telegraph office and Engine house San Diego, San Ysidro and El Centro.

WATCH INSPECTORS

2. Stanley A. Pope, Manager of Time Service, San Francisco.
Leo. M. Schiller, local watch inspector, 1025 Fifth Avenue, San Diego.
R. E. Couch, local watch inspector, El Centro.
Sieglitz and Co., local watch inspectors, Calexico.

CLEARANCE CARDS

3. All trains get clearance cards as follows:
All at San Ysidro and Tecate.
All Eastward at 8th Street.

REGISTER EXCEPTIONS

4. First class trains register by registering ticket (Form 2642) at 8th Street. Trains originating and terminating at Agua Caliente only will register there.

5. Extra trains will register at San Ysidro.

GRADE CROSSINGS

6. Conductors and Brakemen, flagging crossings, will cross the tracks before signalling enginemen to proceed, and if more than one track to be crossed will remain in advance of their train until last track is reached.

7. Trains on San Diego-El Centro Subdivision will approach railroad crossing at F Street, Chula Vista, expecting to find the Main Line blocked and will pass over this crossing not to exceed 15 miles per hour.

8. At following grade crossings, trains will stop not nearer than 50 feet nor farther than 500 feet from the crossing and will proceed only on signal from flagman:
Crossing at Chula Vista Jct. except San Diego-El Centro subdivision trains which are governed by paragraph 7, Special instructions in Time Table.
San Diego Electric Railway crossing at First and Orange Street, Coronado.
San Diego Electric Railway crossing at 16th Street, San Diego.
Transfer track of San Diego Electric Railway Company, with tracks of that Company on Broadway, San Diego.

9. Trains going into Otay Gravel Pit will stop at West line of Main Ave., and not cross except when preceded by flagman with Red flag or light.

10. Trains leaving Otay Gravel Pit must be preceded by flagman over Main Ave., but will not be required to stop.

11. Trains operating at Chula Vista will stop on F Street before crossing National Ave.
At Second Ave., and at sidewalk on Third Ave., near G Street stop and be preceded by flagman.

12. Freight trains will stop and pass over crossings at Lookout Ave., La Mesa, and Magnolia Ave., Santee, only when preceded by flagman.

13. Trains using San Diego Electric Railway Company Transfer will stop before crossing tracks of that Company on F Street, San Diego.

14. Trains approaching Mount Hope cemetery west of bridge 6 will use care to avoid meeting funeral parties where road crosses track. If any should be encountered there, hold train back and allow party to cross ahead of train.

MAXIMUM SPEED OF TRAINS, EXCEPT AS OTHERWISE NOTED, IN MILES PER HOUR AS FOLLOWS:

	M.P.H.
15. Passenger trains	50
Gas-electric trains	40
Freight trains	35
Mixed trains	30
Light engines	35
Engines 101 to 106, inclusive	35
Engines backing, coupled in train or light, main line	25
Same on branch lines	20
Trains handling locomotive crane	20
Trains handling dead or disabled engines with all rods on or with main or side rods removed	30
Same with main and side rods removed	20
All trains through sidings, main line	12
Same through sidings, branch lines	10

OTHER MAXI

16. ALL TRAI
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On Rodrigu
Tunnel No.
Market St.
Over road c
Mile Post 14

PASSENGE
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Culvert 106-

FREIGHT
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Hipass and
Culvert 106-
Redondo an
Tecate and

17. SAN DIEG
ALL TRAI
Crossing 30
Across 13th
Over Electr
Between 8th
Over Horse
Between 32n
Between Ri

18. ALL TRAI
On F Street
Between F
Between On
Between Te

19.

Speed per Hour.	1 M in Min.
6	10
8	7
10	6
12	5
15	4
16	3
17	3
18	3
19	3
20	3

20.

Speed Miles per Hour	1 Kilometer in Min.	Sec.
6	6	13
8	4	40
10	3	44
12	3	06
15	2	29
16	2	20
17	2	11
18	2	04
19	1	57
20	1	52

21. Rule S-72.
OF THE S

22. RULE 93.
stations:
EIGHT
TIJUAN

23. Locomotive
east of cem

24. Rule 10 (H
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ferred to in
Rule 10 (J)
mile from s

Special Instructions

Engineman having first been instructed by the Conductor to set his brake valve and leave it in the running position, train crew then go to rear end of train and so locate themselves that each man can observe two cars at a time, the number of cars in each test depending on the number of trainmen available. Close the angle cock on about fourth or sixth car from the rear, but do not break the air hose. One man will then go to rear of caboose, open angle cock very slowly, allowing a small flow of air to escape, about the same amount as would be released from brake valves for a service application, then close it. If all brakes apply properly and show no bad triple valve action, then open the angle cock on rear of caboose, letting out all of the air in the block of cars being tested. Close the angle cock, thus leaving block of cars empty of air in rear of train. Then proceed to the point where the angle cock had been closed on the train, leaving it closed, and close another angle cock about four or six cars ahead of this point. Then proceed with the test in the same manner as for the first block of cars in the rear, permitting the air in this block of cars to flow back to the uncharged portion. This procedure to continue until the entire train has been tested.

Air brake of car going into emergency will be cut out and report rendered on Form 2809.

After test completed and before train proceeds, rear end air brake test as per Rule 17 must be made to insure all hose coupled and angle cocks in proper position.

USE OF RETAINERS

44. All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106 B to Coyote Wells. Where retainers are used, speed of freight and mixed trains on any grade of over one per cent. must not exceed 25 miles per hour; and on grades this character for the first five miles, time consumed in traveling any one mile must be not less than three minutes. This maximum speed restriction will not affect speed on heavy grade or in other locations where maximum is now provided.

INTERNATIONAL BOUNDARY

45. Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt response is not gained after whistle blast, an employee will go at once to Government Headquarters and request service.

46. Trains will stop before crossing the International Boundary Line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary Line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

47. Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by Officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

48. Trains carrying passengers will not stop between Lindero and Campo Stations except in cases of emergency.

STRUCTURES LESS THAN STANDARD CLEARANCE

SAN DIEGO-EL CENTRO SUBDIVISION

49. Rock bins, sand chute and braces for overhead conveyor Otay Gravel Pit spur.
Cement shed, west side of Rodriguez spur.

SAN DIEGO-LAKESIDE SUBDIVISION

50. Rock bins on Spring Valley crusher spur and siding.
Overhead highway bridge main line between Grossmont and El Cajon.

CHULA VISTA-CORONADO SUBDIVISION

51. Oil rack Pac. Cotton Seed plant, Potash.

SAN DIEGO YARDS

52. Trolley wires and pole on Fifth Avenue spur between J and L Streets.
Freight house tracks.
Union Oil Company spur tracks.

53. All employees are warned it is dangerous to stand erect on cars, especially cars of extraordinary height.

54. Trainmen must not ride on cars when switching under rock bins, Spring Valley.

55. Train and Enginemen are cautioned to watch closely for impaired clearance signs.

56. Location and Capacity of Additional Spur Tracks on San Diego-El Centro Subdivision.

Name	Connection	Distance from San Diego in Miles	Capacity
Linen	W	9.5	16 Cars
Standard	E	19.2	4 Cars
Arguello	W	20.2	4 Cars
Rodriguez	W	26.0	30 Cars
Barrett	W. & E.	67.1	16 Cars
Clover Flat Pit	W	74.4	17 Cars
Sugar Loaf Pit	W	117.1	5 Cars
Lumber	E	135.4	7 Cars
Edgar	E	137.1	11 Cars
Blue Goose	E	142.6	5 Cars

57. ADDITIONAL STATIONS ON SAN DIEGO-EL CENTRO SUBDIVISION

Name.	Distance from San Diego.
West Park Ave.	14.2
Agua Caliente Hotel	18.1
Girl Scout	73.7
Mills Crossing	83.5
Dubbers	96.0

RATINGS OF LOCOMOTIVES

58. In M's of 1000 pounds.

Engines	Class Designation		San Diego to Redondo .9% Grade	Redondo to Hipass 1.4% Grade	El Centro to Coyote Wells .9% Grade	Coyote Wells to Hipass 2.2% Grade
10	T-57 18/24	73	971	629	971	367
12	T-57 18/24	87	1075	695	1075	400
20	T-63 21/28	128	1818	1196	1818	720
24, 25, 26, 27	T-63 21/26	140	1725	1120	1725	655
50	C-50 20/24	122	1843	1267	1843	825
101	C-57 22/30	200s	2600	1600	2600	1100
102	C-57 22/30	200s	2600	1600	2600	1100
103	C-57 22/30	194s				
104	C-57 22/30	194s	2600	1600	2600	1100
105, 106	C-57 20/30	194s				
2353, 2354	T-63 22/30	162s	2200	1450	2200	950
Allowance for empty and under-loaded cars	Less than 50 Ms.		3	3	3	3
	More than 50 Ms.		0	0	0	0

These ratings include the total weight of train, exclusive of engine and tender which the different class of locomotives will haul in each direction between the stations shown.

59. LIGHT WEIGHT OF PASSENGER CARS

	Car No.	Light Weight
Cafe-Observation	01 to 04	127,400
Business Cars	050	146,500
" "	051	57,800
Comb. Coach-Baggage	174	136,900
" " "	175	105,200
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LINES OF THE
SAN DIEGO & ARIZONA EASTERN RY.
IN CALIFORNIA
TIJUANA & TECATE RY.
IN MEXICO

SCALE OF MILES
0 5 10 15 20 25

JUNE 1930
C.M.E.